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### Remarks

Claims 1-15 and 19-23 were pending in the application. Claims 1-6, 8-13, and 20-23 were rejected. Claims 7, 14, 15, and 19 were previously withdrawn. No claims were merely objected to and no claims were allowed. By the foregoing amendment, no claims are canceled, claim 23 is amended, and claim 24 is added. No new matter is presented.

#### Claim Rejections-35 U.S.C. 112

Claim 23 was rejected under 35 U.S.C. 112(2). Applicants respectfully traverse the rejection.

By the foregoing amendment, the claim has been amended for *ipsis verbis* antecedent basis.

#### Claim Rejections-35 U.S.C. 103

Claims 1-6, 8-13, and 20-23 were rejected under 35 U.S.C. 103(a) as being unpatentable over YUP1756/88 in view of paper of Huque, WO96/23168, and Lagen et al. (US5076103). Applicants respectfully traverse the rejection.

At Section 7, the Office action identifies four background factors under *Graham v. John Deere*. However, the Office action then fails to address these factors.

The third paragraph of page 4 of the Office action reads: "However, the document is concerned about the pressure of the reagents and the proper cleaning pressure. Thereby, the disclosure of YU P1756/88 encompasses providing a pressure sensor in the apparatus of YU P1756/88 in order to control the functioning of the apparatus." This statement and its application to the present claims involve bootstrapping. First, YU P1756/88 does identify a detonative cleaning apparatus. This will further become relevant in the discussion of the propriety of the combination. The discussion of reagent pressure (see the end of the first sentence of the third paragraph of page 3 of the English translation) at best (worst?) would suggest measuring reagent pressure at the reagent source(s). The reference to "cleaning pressure" appears misplaced. Nothing has been identified which would suggest a pressure probe within the vessel interior exposed to a shockwave after the shockwave exits the conduit second end/outlet. For example, the drawings of the reference do not show any such sensor in the reactor 26.

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The fourth paragraph of page 4 of the Office action asserted: "Moreover, paper of Huque and WO 96/23168 teach that the use of pressure sensors was known in the art to control functioning of the pressure wave cleaning apparatuses and to ensure proper cleaning action of the apparatuses." As with the citation above, there is insufficient specificity to properly respond. The Huque reference identified an experimental set-up involving test slag samples held at the exit of a detonation tube. Paragraph spanning pages 3 and 4. This is not an actual situation involving an apparatus and a vessel. Any pressure measurement is done in the experimental context and not in an actual use context. For example, the conduit and the samples are not exposed to the temperatures of being in an actual furnace.

The WO'168 application identifies gas, steam, or water soot blowers. WIPO abstract. There is individual adjustment of each nozzle's flow rate and pressure. Derwent abstract. There is no identification or suggestion of use in a detonative/combustive cleaning apparatus. There is no indication of a shockwave or a sensor positioned to be exposed to the shockwave.

The fifth paragraph of page 4 of the Office action reads: "It would have been obvious to an ordinary artisan at the time the invention was made to provide the apparatus of YU P1756/88 with a pressure sensor to enable control of the apparatus with reasonable expectation of success since the teaching of YU P1756/88 encompasses such and since the secondary documents teach such as conventional." This is clearly conclusory. What is the asserted meaning of "encompasses such"? The assertion of an "expectation of success" is a canard. What success is expected beyond the inherent operation of the YU reference? Where's the motivation.

The final paragraph of page 4 of the Office action asserted that "the pressure measuring probes as claimed were known in the art as evidenced by Lagen et al. ..." The second paragraph of page 5 asserts a conclusory motivation to use the Lagen et al. probe: "as pressure measuring means since Lagen et al recommends the probe for the use in high temperature and pressure environment." This is merely conclusory. Lagen et al. involves "a new and improved static pressure probe for use in high temperature supersonic wind tunnel testing." Col. 1, lines 43-45. This is not the sootblower art. There is no suggestion to adapt the probe to the sootblower art.

Further questions are begged regarding elements not identified:

Where is the identified pressure sensor of claim 1?

Where is the aft surface with a second port of claim 8?

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Where is the flat and third port of claim 9?

Where is the signal communication line of claim 11?

Where is the lateral joining and opposite first port of claim 21?

Where is the clamp of claim 22?

New claim 24 identifies the space 216 surrounding the fixture 204 which holds the sensor 202. The asserted combination does not suggest this.

Accordingly, Applicants submit that claims 1-15 and 19-24 are in condition for allowance. Reconsideration and further examination are requested. Please charge any fees or deficiency or credit any overpayment to our Deposit Account of record.

Respectfully submitted,

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I hereby certify that this correspondence is being facsimile transmitted this 15<sup>th</sup> day of October, 2007 to the USPTO, at Fax No. 571-273-8300.

  
Antoinette Sullo